

Patent Claims

1. A drive for switching devices, in which stored energy is converted to a rapid switching movement for activation of a switching member, with a pressure which is produced directly or indirectly being used to operate the switching member (21), characterized by controlled energy conversion on the basis of a spark discharge, in which electrically stored energy or energy that is taken from the power distribution power supply is used in order to vaporize a drive medium with the gas pressure which is produced during this process acting on the switching member.
2. The drive as claimed in claim 1, characterized in that the drive medium is a fluid, that is to say a liquid or gaseous medium.
3. The drive as claimed in claim 2, characterized in that the fluid is water.
4. The drive as claimed in claim 2, characterized in that the fluid contains ion-conductive additives.
5. The drive as claimed in one of the preceding claims, having a spark gap, which is arranged within the fluid, for energy conversion, characterized in that the spark gap (31, 32) is not live during operation of the switching device (1), and is loaded briefly with voltage only for the process of tripping the switching member (21).
6. The drive as claimed in claim 4, characterized in that means (33, 34) are provided for production of a high-voltage pulse, and in that the high-voltage pulse is passed to an auxiliary electrode (32) of the spark gap.

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7. The drive as claimed in claim 5, characterized in that the high-voltage pulse is produced by a voltage source (34) with a parallel-connected capacitor (33).

8. The drive as claimed in claim 5, characterized in that the auxiliary electrode (32) has an associated switch (35).

9. The drive as claimed in claim 7, characterized in that the switch is a semiconductor switch, in particular an IGBT, power MOSFET or thyristor.

10. The drive as claimed in claim 5, characterized in that means are provided for inductive injection of the high-voltage pulse.

11. The drive as claimed in one of the preceding claims, characterized in that means (40 - 45) are provided for latching/unlatching the axially moving bolt (20) with the moving contact (21).

12. The drive as claimed in claim 9, characterized in that the latching/unlatching means (40 - 45) operate mechanically.

13. The drive as claimed in claim 9, characterized in that the latching/unlatching means (40 - 45) operate magnetically.

14. The drive as claimed in claim 10 or 11, characterized in that the energy for latching is applied by the electrohydraulic drive (30).